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AUTHOR Fenzel, L. Mickey
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ABSTRACT

Maintaining an intrinsic motivation for school work is considered to be an important element in keeping adolescents in school and out of trouble. Recent research has begun to study factors that contribute to the development of an intrinsic interest in school learning. Two such important factors are self-esteem and the stressfulness of the school environment. The study reported in this paper tested a model that hypothesizes that intrinsic motivation is affected directly by perceived strain related to school and self-esteem. In addition, it is hypothesized that self-esteem mediates the effect of strain on intrinsic motivation. Intrinsic motivation is operationalized as a preference for academic challenge, high curiosity in school work, and an independent approach to mastery of the academic environment. Results from 84 seventh-grade middle school students provided strong support for the hypothesized model. The clear associations among strain, self-esteem, and intrinsic motivation suggest that a middle school environment that minimizes strain and enhances early adolescent self-esteem can increase a student's motivation to learn and may reap additional benefits of reducing dropout rates and promoting lifelong learning. (Author)

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The Prediction of Intrinsic Motivation among Early Adolescents: A Mediational Model Involving Self-Esteem and Strain

L. Mickey Fenzel, Ph.D.

Loyola College in Maryland
Psychology Department
4501 North Charles Street
Baltimore, MD 21210

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Abstract

Maintaining an intrinsic motivation for school work is considered to be an important element in keeping adolescents in school and out of trouble. Recent research has begun to study factors that contribute to the development of an intrinsic interest in school learning. Two such important factors are self-esteem and the stressfulness of the school environment. The present study tests a model that hypothesizes that intrinsic motivation is affected directly by perceived strain related to school and self-esteem. In addition, it is hypothesized that self-esteem mediates the effect of strain on intrinsic motivation. Intrinsic motivation is operationalized as a preference for academic challenge, high curiosity in school work, and an independent approach to mastery of the academic environment. Results, using 84 seventh-grade middle school students, provided strong support for the hypothesized model. The clear associations among strain, self-esteem, and intrinsic motivation suggest that a middle school environment that minimizes strain and enhances early adolescent self-esteem can increase a student's motivation to learn and may reap additional benefits of reducing dropout rates and promoting life-long learning.

The Prediction of Intrinsic Motivation among Early Adolescents: A Mediational Model Involving Self-Esteem and Strain

There appears to be incontrovertible evidence that many adolescents are disengaging from formal education. This disengagement is exhibited in truancy, low levels of participation in school activities, and delinquency in the form of school violence and vandalism (Natriello, 1984). Researchers and educators alike continue to address difficulties of keeping students interested in as well as in school. An important contributor to maintaining student participation in school is the student's intrinsic interest in learning activities. If students fail to find school learning activities intrinsically interesting, they are more apt to put forth little effort into their school work, be truant, and eventually drop out of school.

Developmental research on motivation suggests that the problem of adolescents dropping out of school has its roots in the early grades. As Harter (1981) has shown, intrinsic motivation for school work declines as students move from elementary school to junior high school. If students' curiosity, preference for challenging over easy tasks, and desire to master a learning situation independently decline over the school years, it is likely that their developmental needs are not being met in schools. As a result of facing unmet needs, these adolescents may elect to drop out and find a job that will

at least provide them with some income (see also Eccles & Midgley, 1989).

One important factor that keeps adolescents interested in school work and helps them graduate from high school may be to keep school interesting and challenging for them. Alternative high school programs that give students some control over their school environment and concentrate on self-esteem enhancement appear to accomplish these goals (cf., Connell, 1988; Greene & Uroff, 1989).

Recent research has begun to study factors that contribute to the development of an intrinsic interest in school learning. It has been shown, for example, that self-esteem and depressed affect contribute to the development of an intrinsic orientation in the classroom (Harter, 1987). It comes as no surprise that students who feel worried about their school performance and hold low evaluations of their academic competence and general self-worth perform poorly in school and lose interest in academic activities (cf., Busch-Rossnagel & Vance, 1982). Students low in self-esteem are also likely to be truant from school (Englander, 1986). The research on the effects of low self-esteem and school interest suggests that an exploration of the antecedents of diminished self-esteem and intrinsic motivation for school work is needed.

School-Related Role Strain and Self-Esteem

Children form evaluations of the worth or value of the self from the feedback they receive from significant others in their lives (Harter, 1983). Parents, peers, and teachers are important sources of information and feedback that affect children's perceptions of themselves as students as well as their evaluations of self-worth.

Recent research has shown that demands and feedback from role senders such as parents, peers, and teachers often differ from and conflict with students' personal evaluations and expectations (Fenzel, 1989b). The term, "role strain", has been used to describe the discomfort or distress felt by children and early adolescents as a result of these discrepant and conflicting evaluations and expectations. As with adults who experience role strain in the workplace, research with early adolescents has shown a significant association between role strain and self-esteem (Fenzel, 1989a). Busch-Rossnagel and Vance (1982) provide additional evidence of the detrimental impact of school stress on self-esteem.

This research on self-esteem and intrinsic motivation suggests that school-related strain may have an adverse impact on intrinsic motivation in school, an effect that is likely mediated through self-esteem. The present study tests a model of this relationship among strain, self-esteem, and intrinsic motivation. Shown in Figure 1, this

model combines the theoretical and empirical work of both Fenzel (1989a) and Harter (1987).

Insert Figure 1 about here

Method

Subjects included 84 seventh-grades who attended a 6-8 middle school in a small city school district in New York State. They were predominately white (90%) children of well-educated parents, with 70% living in their two-parent family of origin. Students included in the study averaged in the 73rd percentile (SD = 25 percentile points) of the Vocabulary subtest of Stanford Achievement Test administered in their fifth-grade year. These subjects were a subset of 120 students followed over a 3-year period before, during, and after the transition to middle school.

Students completed questionnaires that contained several scales at each of the four administrations. The instruments relevant to the present study include: the Early Adolescent School Role Strain Inventory (EASRSI, Fenzel, 1989b), a 27-item measure of the number and magnitude of strains related to the role of student, the Self-Perception Profile for Children (SPPC, Harter, 1985) which includes a subscale that assesses global self-worth (self-esteem), and the Scale of Intrinsic versus Extrinsic

Orientation in the Classroom (SIEOC, Harter, 1981). The Intrinsic Mastery Motivation (IMM) subscale that assesses a motivational component of the intrinsic-extrinsic orientation was used in the present study (see Harter & Connell, 1984).

The EASRSI assesses strains that emanate from the demands associated with the role of student placed on early adolescents by classmates, parents, and teachers. Four subscales are identified on the EASRSI: School Demands, Teacher Relations, Parent Control, and Peer Interactions (Fenzel, 1989b). When completing the EASRSI, subjects first indicated whether a given statement, which described a potential source of strain, was "True" or "False" for them. If subjects chose "True," they then proceeded to indicate how much the strain bothered them on a 7-point scale from 0 (Bothered: Not at all) to 6 (Bothered: A lot).

Mean strain magnitude. For purposes of analyses, responses were transformed into mean magnitude scores for the total strain scale. Mean magnitude is the mean of the magnitude scores of all of the items on the scale. Subjects endorsed an average of one-third of the strain items and reported a mean strain magnitude of 3.3 on the 7-point (0-6) scale for the items endorsed. The total strain magnitude scale and subscales were found to possess

good internal reliability and validity (see Fenzel, 1989b).

The format of the self-esteem subscale of the SPPC (6 items) and the IMM subscale of the SIEOC (18 items) is identical. Subjects responded by selecting one of two statements that was "most like them" and then deciding the extent to which the statement was true for them. Items were then scored from 1 to 4 with higher numbers indicating a high level of self-esteem or intrinsic motivation. Subjects' mean self-esteem subscale score was 20.0 (SD = 3.5, range 6-24) and mean intrinsic motivation subscale score was 52.5 (SD = 10.5, range 18-72).

Results

Multiple regression equations were constructed to test the hypothesized model. Results, outlined in Table 1, supported the hypothesis that strain affects motivation both directly and indirectly through self-esteem. In other words, the more strained early adolescents perceived themselves to be in the school environment, the less of an intrinsic motivational orientation they exhibited. This diminished intrinsic motivation--or increased extrinsic motivation--was demonstrated in a preference for easier tasks, diminished curiosity in school work, and less of an inclination to master the academic environment independently (see Harter & Connell, 1984). In addition to this direct relationship, increased strain also

affected motivation indirectly through decreased self-esteem.

Insert Table 1 about here

Discussion

The implications of this work are important from both a research and a practical standpoint, although the cross-sectional nature of the study cautions us about inferring cause-and-effect relationships. The clear associations established among strain, self-esteem and motivation suggest that establishing a middle school environment that minimizes unnecessary strain and enhances self-esteem can increase early adolescents' motivation to learn independently. The benefits afforded early adolescents at a time when intrinsic motivation for academic work is on the decline (Harter & Connell, 1984) may have long-term effects of keeping adolescents in school through high school graduation.

Keeping adolescents interested in school is often difficult. Research has shown that some junior high school environments tend to alienate students from the educational process (Eccles & Midgley, 1989). Eccles and Midgley report that junior high school teachers often give students less control over the formation of rules and regulations that govern their school environment, fail to

provide developmentally appropriate cognitive challenge, and view students as less mature than elementary school teachers viewed them. Such approaches to teaching may contribute to the decreased curiosity and interest in pursuing challenging academic work independently that was observed by Harter and Connell (1984) through the middle and junior high school years. On the other hand, research suggests that providing early and middle adolescents with an appropriate level of decision making and developmentally appropriate challenge in a supportive environment increases their satisfaction in school and reduces dropping out (Connell, 1988; Epstein & McPartland, 1976; Greene & Uroff, 1989).

Previous stress research among adolescents suggests that the relationships among school strain, self-esteem, and intrinsic motivation are more likely reciprocal than unidirectional (Compas, Wagner, Slavin, & Vanatta, 1986; Fenzel, under review). Though school role strain is a likely contributory cause of changes in student self-esteem and intrinsic motivation, the latter factors no doubt contribute to changes in the perceptions of the stressfulness of the school environment as well as to each other. Students who have high evaluations of themselves are more likely to seek to master their school learning tasks and to maintain high levels of curiosity for

academic learning, and their motivational orientation is likely, in turn, to affect self-esteem perceptions.

Future research efforts might pursue the nature of the connections among the variables examined in the present study and extend the present study to determine the impact of strain, self-esteem, and motivation on problematic behaviors, such as truancy and dropping out of school, and life-long learning pursuits.

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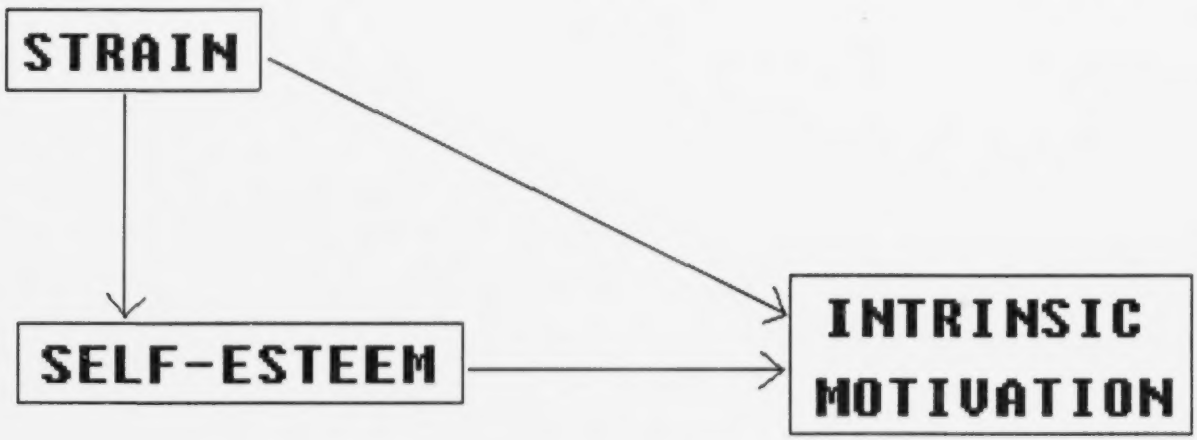

Figure 1. Model of hypothesized mediational role of self-esteem in the prediction of intrinsic motivation of seventh graders.

Table 1.

Results of Multiple Regression Analyses Testing the Effect of Strain on Intrinsic Motivation Mediated by Self-Esteem

	Predictor Variables			
	Strain Magnitude		Self-Esteem	
Dependent Variable	R^2 Change	F	R^2 Change	F
Self-Esteem	.20	20.24*		
Intrinsic Motivation	.19	18.45*	.08	9.16+

* $p < .0001$ + $p = .003$